

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as shown below. A complete listing of the claims, including their current status, is set forth below.

1. **(Currently Amended)** A method for ~~treating a backing element comprising a gasket, wherein said backing element is adapted to join with a microarray substrate to form~~ forming an array assay chamber that is sealed by ~~said a~~ said gasket, wherein said array assay chamber comprises at least one addressable array on said microarray substrate, said method comprising:

treating a backing element comprising a gasket with at least one of: (1) depositing SiO<sub>2</sub> on said gasket, (2) contacting said gasket with at least one of a liquid phase and a vapor phase, (3) contacting said gasket with plasma, to provide a treated surface of treat said backing element gasket, and

joining said backing element to a microarray substrate to produce an array assay chamber that is sealed by said treated surface of said gasket and comprises at least one addressable array on said microarray substrate.

2.-17. **(Canceled)**

18. **(Previously Presented)** The method of Claim 1, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

19.-26. **(Canceled)**

27. **(Previously Presented)** The method of Claim 1, wherein said treating comprises increasing the hydrophilicity of said gasket.

28. **(Previously Presented)** The method of Claim 1, wherein said treating allows said gasket to form a seal when said backing element is joined to said microarray substrate.

29. **(Previously Presented)** The method of Claim 1, wherein said treating comprises sequentially contacting said gasket with at least two of: plasma, UV with O<sub>2</sub> and a solvent.

30.-52. **(Canceled)**

53. **(Currently Amended)** A method for ~~treating a backing element comprising a gasket, wherein said backing element is adapted to join with a microarray substrate to form forming~~ an array assay chamber that is sealed by ~~said a~~ gasket, wherein said array assay chamber comprises at least one addressable array on said microarray substrate, said method comprising:

contacting ~~said a~~ **backing element comprising a** gasket with plasma to **provide a treated surface of** treat-said ~~backing element gasket, and~~  
**joining said backing element to a microarray substrate to produce an array assay chamber that is sealed by said treated surface of said gasket and comprises at least one addressable array on said microarray substrate.**

54. **(Canceled)**

55. **(Previously Presented)** The method of Claim 53, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

56. **(Canceled)**

57. **(Currently Amended)** A method of using a backing element, wherein said backing element is adapted to join with a microarray substrate and comprises a gasket, comprising:

contacting said gasket with plasma to **provide a treated surface of** treat-said gasket; and

joining said backing element to a microarray substrate to produce an array assay chamber that is sealed by said treated surface of said gasket and comprises at least one addressable array of said microarray substrate.

58. (Canceled)

59. (Previously Presented) The method of Claim 57, wherein said plasma is produced from a gas selected from the group consisting of nitrogen, air, argon, oxygen, nitrous oxide, helium, water vapor, carbon dioxide, methane, and combinations thereof.

60. (Previously Presented) The method of Claim 57, wherein said surface modifying comprises increasing the hydrophilicity of said gasket.

61. (Previously Presented) The method of Claim 57, wherein said surface modifying allows said gasket to form a seal when said backing element is joined to said microarray substrate.

62. (Previously Presented) The method of Claim 57, wherein said surface modifying comprises sequentially contacting said gasket with at least two of: plasma, UV with O<sub>2</sub> and a solvent.